

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-068072

(43)Date of publication of application : 03.03.2000

(51)Int.CI. H05B 33/22  
H05B 33/10

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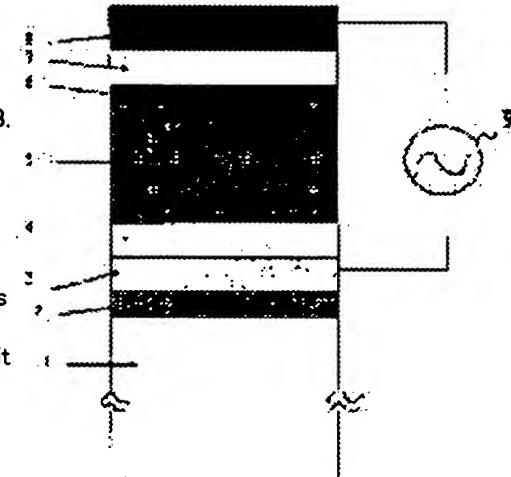
(30)Priority  
Priority number : 98 981802 Priority date : 21.08.1998 Priority country : FI

## (54) THIN-FILM ELECTROLUMINESCENCE DEVICE AND MANUFACTURE OF THE SAME

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a thin-film structure having improved stability by forming a layer containing the added metallic sulfide only on the side opposite to a ZnS layer for a substrate, and moreover adjacent to the ZnS layer.

**SOLUTION:** A substrate 1 is preferably made of glass, Al<sub>2</sub>O<sub>3</sub>, silicon or a ceramic compound. An ion barrier layer 2 is preferably made of oxide or nitride of metal, for example, Al<sub>2</sub>O<sub>3</sub>. A first set of electrodes 3 are made of a transparent material such as indium tin oxide or ZnO. A first insulating layer 4 is made of an oxide or nitride of metal or their mixture, for example, Al<sub>x</sub>Ti<sub>y</sub>O<sub>z</sub>. A ZnS fluorescent material layer 5 is made of ALE grown ZnS. An intermediate layer, including metallic sulfide and laminated on the ZnS fluorescent material layer 5, is made of an alkali earth metal sulfide, for example, SrS, MgS, CaS, BaS or mixture of at least two kinds of these. Preferably it is strontium sulfide.



### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]